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ABSTRACT

Because teacher attitude could be crucial to the success or failure of mainstreaming handicapped children, the Attitudes Toward Mainstreaming Scale (ATMS) was developed to establish a baseline of current teacher attitudes towards mainstreaming and to monitor future attitudinal changes, and was validated and cross-validated through a principal axis factor analysis procedure. To establish normative data for the ATMS, the scale was administered in 1980 to 2549 teachers and professional educational staff in 29 rural Georgia counties. Attitudes towards three factors (capability, general mainstreaming, and traditional limiting disabilities) were measured and the effect of five variables on attitude was studied. In general, rural Georgia teachers and educational professionals favored the principle of mainstreaming. Teachers were willing to include in mainstreamed classes those students whose disabilities did not inhibit their learning or that of their classmates. They were against mainstreaming disruptive students or those with limited learning abilities. The respondents' sex, certification category, and teaching field had no effect on their attitudes towards mainstreaming. Respondents with more teaching experience had somewhat less favorable attitudes towards mainstreaming and older respondents were significantly less favorable. (SB)

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USE OF THE ATTITUDES TOWARD MAINSTREAMING SCALE WITH RURAL GEORGIA TEACHERS

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Use of the Attitudes Toward Mainstreaming Scale with Rural Georgia Teachers

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The objectives of this study were to establish norms for rural Georgia teachers on the Attitudes Toward Mainstreaming Test (ATMS) (Berryman and Neal, 1980) and to discover whether there are attitudinal differences toward mainstreaming among rural teachers with regard to the subgroup characteristics of age, sex, teaching field, certification level, and years of professional experience.

The Education of all Handicapped Children's Act of 1975 (P.L. 94-142) requires that handicapped students be placed in the "least restrictive" educational environment. "Mainstreaming," the inclusion of handicapped students in the regular classroom, is one method of meeting this requirement, and is a current major issue in public education. One area of particular concern has been the potential effects on teacher attitudes on the success of mainstreaming.

There is reason to believe that attitudes of educators toward mainstreaming are important. The attitudes of regular classroom teachers have been found to affect treatment of students (Silberman, 1969); Good and Brophy, 1972), and those attitudes could be crucial to the success or failure of mainstreaming. The possibility that attitudes held by teachers

can become self-filling was discussed by Mitchell (1976). The conclusion of her review proposed that in certain circumstances expectations founded on attitude rather than fact can affect adversely a student's academic or social behavior. A wide variety of useful studies, although conducted with instruments lacking adequate reliability, validity, or norms, has raised serious questions about the effect of teacher attitudes on teaching exceptional students (Kearney and Roccio, 1956; Haring, Stern, and Cruickshank, 1958; Murphy, Dickstein, and Dripps, 1960; Combs and Harper, 1967; Anthony, 1972; Panda and Bartell, 1972). While the literature reflects a high current interest in mainstreaming and related issues, there are little hard data on educators' attitudes toward mainstreaming.

The literature, including compilations of measurement reviews, offers no evidence that a viable scale of attitudes toward mainstreaming had been developed previously. In most instances, instruments used to measure attitudes related to mainstreaming have been designed for specific research activities without regard for formal validation procedures (Gickling and Theobald, 1975; Moore and Fine, 1978; Shotel, Iano, and McGettigan, 1972; Vacc and Kirst, 1977; Wechsler, Suarez, and McFadden, 1975). In other studies, instruments either contained items which did not appear to meet criteria for attitudinal statements (Harasymiw and Horne, 1976) or presented validation evidence which seemed insufficient (Jordan and Proctor, 1969).

A need was seen for an instrument to measure attitudes toward mainstreaming in order that a baseline of current attitudes may be established and future attitude changes monitored. The essential characteristics of the instrument were deemed to be adequate reliability and validity, ease of administration, and brevity of time required.

To meet this need, the eighteen-statement Attitudes Toward Mainstreaming Scale (ATMS) was validated and cross-validated through a principal axis factor analysis procedure (Berryman, Neal, and Robinson, 1980; Berryman and Neal, 1980). The 159 participants comprising the original sample and the 164 participants of the cross-validation sample included both preservice students and inservice teachers in seventeen different teaching fields. The same three factors, named Learning Capability, General Mainstreaming, and Traditional Limiting Disabilities, emerged from the analysis of each sample. Cronbach alpha reliability coefficients for the total scale were .89 and .88 for the two samples; those for the factors ranged from .76 to .84. Pearson product moment correlations between individual factors and total scale scores ranged from .81 to .86 with factor intercorrelations ranging from .42 to .55. These results provided enough evidence of the reliability and factorial validity of the ATMS to justify continued efforts to establish comprehensive normative data. The target group for norm establishment in this study is rural Georgia teachers.

The ATMS was administered in fall, 1980, to 2549 rural Georgia teachers and other professionally certified staff members in 29 counties. Geographic dispersion of the counties provided a sample population that was representative of rural Georgia. Curriculum directors, principals, or superintendents made necessary local arrangements for administration of the scales.

A mean total scale score of 58.45 with a standard deviation of 36.52 for all respondents was obtained. The mean indicated moderate approval of mainstreaming, but also showed extensive variability within the sample

population. Scale items, and the means and standard deviations for the three factors and for each item, are included in Table 1.

(Insert Table 1 here)

Factor scores and item scores indicate that rural Georgia teachers favor the principle of mainstreaming, and are willing to teach in mainstreamed classrooms those students whose disabilities do not inhibit their learning or that of their classmates. They oppose mainstreaming of students who are limited in ability to learn or who are likely to be disruptive and thus deter the learning of entire classes of students.

Sex, level of certification, teaching field, age, and years of experience of the respondents were obtained. ANOVAs were calculated to determine whether significant differences occurred within each of the categories in total score and in each of the three factor scores. No significant difference between the sexes was found.

Four categories of certification were examined:

1. Non-professional
2. Professional, bachelor's level
3. Professional, master's level
4. Professional, specialist's and doctoral level

No significant difference was found among these categories.

Ten teaching fields were examined:

1. Elementary
2. English and language arts
3. Social studies
4. Science
5. Mathematics
6. Physical education

TABLE 1

ATMS ITEMS, FACTORS, MEANS, AND STANDARD DEVIATIONS

Factor 1, Learning Capability	Mean=16.96	Standard Deviation=14.41
M 2.26	SD 0.97	Visually handicapped students who can read standard printed material should be in regular classrooms.
M 2.87	SD 1.39	Physically handicapped students confined to wheelchairs should be in regular classrooms.
M 2.50	SD 1.09	Physically handicapped students not confined to wheelchairs should be in regular classrooms.
M 2.13	SD 0.86	Students who stutter should be in regular classrooms.
M 2.80	SD 1.15	Students with speech difficult to understand should be in regular classrooms.
M 2.35	SD 1.15	Students with epilepsy should be in regular classrooms.
M 1.78	SD 0.74	Students with diabetes should be in regular classrooms.
Factor 2, General Mainstreaming	Mean=25.93	Standard Deviation=14.80
M 2.90	SD 1.33	In general, mainstreaming is a desirable educational practice.
M 2.84	SD 1.23	Students should have the right to be in regular classrooms.
M 4.40	SD 1.34	It is feasible to teach gifted normal, and mentally retarded students in the same class.
M 3.88	SD 1.31	Educable mentally retarded students should be in regular classrooms.
M 4.08	SD 1.30	Students with behavior disorders who cannot readily control their own behavior should be in regular classrooms.
M 3.96	SD 1.31	Students who present persistent discipline problems should be in regular classrooms.
M 3.52	SD 1.41	Mainstreaming will be sufficiently successful to be retained as a required educational practice.
Factor 3, Traditional Limiting Disabilities	Mean=15.56	Standard Deviation=8.51
M 4.33	SD 1.35	Blind students who cannot read standard printed material should be in regular classrooms.
M 2.67	SD 1.11	Hearing impaired students, who are not deaf, should be in regular classrooms.
M 4.52	SD 1.24	Deaf students should be in regular classrooms.
M 3.89	SD 1.42	Students with cerebral palsy who cannot control movement of one or more of their limbs should be in regular classrooms.

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7. Vocational education
8. Special education
9. Administration and other non-teaching professional staff
10. Fine arts

No significant difference was found among these categories.

Age groups were established by date of birth to classify respondents into three groups:

1. Age 30 or younger
2. Age 31-40
3. Over 40

Significant differences were found between the youngest and oldest groups on the total scale score and on each factor score. Respondents who were age 30 or younger were significantly more favorable toward mainstreaming in each analysis than those who were over 40. The oldest group also differed significantly from the middle group on factor 1, with the oldest more opposed to mainstreaming. The increase in opposition to mainstreaming with age could not be attributed to specifics, but was rather an accumulation of slightly stronger opposition to all aspects of mainstreaming. Results showing differences among age groups are shown in Table 2.

(Insert Table 2 here)

Respondents also were classified by years of teaching experience. Four categories were established:

1. 0-1 years
2. 2-5 years
3. 6-10 years
4. Over 10 years

TABLE 2

ATMS SCORES AND DIFFERENCES BY AGE

Total Scale Scores

Youngest	M	56.70	SD	56.80
Middle	M	58.04	SD	12.59
Oldest	M	61.13	SD	12.99

Factor 1 Scores

Youngest	M	16.54	SD	22.30
Middle	M	16.45	SD	5.09
Oldest	M	18.06	SD	5.63

Factor 2 Scores

Youngest	M	25.01	SD	22.36
Middle	M	26.12	SD	6.72
Oldest	M	26.89	SD	6.74

Factor 3 Scores

Youngest	M	15.15	SD	12.85
Middle	M	15.47	SD	3.91
Oldest	M	16.18	SD	3.80

Differences

	df	F	Prob.	SCHEFFE differences at .10 prob.
Total Scale	2/2546	3.22	.04	Youngest/oldest
Factor 1	2/2546	3.12	.04	Youngest and middle/oldest
Factor 2	2/2546	3.56	.03	Youngest/oldest
Factor 3	2/2546	3.19	.04	Youngest/oldest

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No significant differences among groups were found for total scale scores. On two factors, Learning Capability and Traditional Learning Disabilities, the oldest group differed significantly from those with 2-5 years of experience. The most experienced teachers were less favorable toward mainstreaming. Other differences among experience groups were insignificant.

(Insert Table 3 here)

Based on evidence to date, it appears that the Attitude Toward Mainstreaming Scale provides reliable and valid scores for teachers and other educational professionals. Variables analyzed other than age did not seem to have important effects on total scale scores. Age differences were statistically significant; age must be taken into account in interpreting scores of respondents.

Further research to establish national norms is desirable; the three studies to date have been limited to a single state. Direct comparisons between groups, such as rural and inner-city teachers, should be made in the future. At this point, there is some promise that the ATMS can be used to establish a national baseline of attitude toward mainstreaming that could permit determining the influences of teacher education and other efforts that might be used to attempt changes in teacher attitudes.

TABLE 3

FACTOR SCORES AND DIFFERENCES BY EXPERIENCE

Factor 1

0-1 years	M	17.64	SD	40.21
2-5 years	M	15.99	SD	5.02
6-10 years	M	16.30	SD	5.05
Over 10 years	M	17.87	SD	5.61

Factor 3

0-1 years	M	15.59	SD	22.84
2-5 years	M	14.99	SD	3.87
6-10 years	M	15.25	SD	4.07
Over 10 years	M	16.16	SD	3.79

Differences

	dF	F	Prob.	SCHEFFE differences at .10 prob.
Total scale			not significant	
Factor 1	2/2546	2.94	.03	2-5 years/over 10 years
Factor 2			not significant	
Factor 3	2/2546	2.88	.03	2-5 years/over 10 years

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